



Volume 26 | Issue 1

Article 6

9-1-2015

No Medals for Sochi: Why the Environment Earned Last Place at the 2014 Winter Olympic Games, and How Host Cities Can Score a "Green" Medal in the Future

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Recommended Citation

Alexandra L. Sobol, *No Medals for Sochi: Why the Environment Earned Last Place at the 2014 Winter Olympic Games, and How Host Cities Can Score a "Green" Medal in the Future*, 26 Vill. Env'tl. L.J. 169 (2015).

Available at: <https://digitalcommons.law.villanova.edu/elj/vol26/iss1/6>

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2015]

NO MEDALS FOR SOCHI: WHY THE ENVIRONMENT
EARNED LAST PLACE AT THE 2014 WINTER
OLYMPIC GAMES, AND HOW HOST CITIES
CAN SCORE A “GREEN” MEDAL
IN THE FUTURE

“There’s sort of a tragedy about [Sochi’s Olympic preparations] — massive amounts of construction waste, massive amounts of energy, massive amounts of greenhouse gas emissions . . . After [the Olympic Games], it’s over. So all that was done for next to nothing.”¹

—Robert Engelman, President of
the WorldWatch Institute

I. INTRODUCTION

As the Olympic Games (Games) continue to grow in size and grandeur, the demand for curbing the environmental impact on host cities becomes increasingly apparent.² Indeed, hosting the Games involves the development and modernization of the host city’s basic infrastructure, including its sporting venues, roads, electric supply, as well as its public transportation and waste management systems.³ When making such significant changes, however, the area’s wildlife and natural habitats are often either displaced or entirely destroyed while large amounts of waste are generated.⁴ Such occurrences are difficult to reconcile with the goal of Olympism, which is “to place everywhere[,] sport at the service of the harmonious development of man, with a view of encouraging the establishment of a peaceful society concerned with the preservation

1. Colin Daileida, *Hasty Olympics Construction Could Devastate Sochi*, MASHABLE (Jan. 21, 2014), <http://mashable.com/2014/01/21/olympics-construction-sochi> (describing negative environmental impact due to Sochi Olympic Games’ preparation).

2. *See id.* (detailing concerns of Russia’s environmental impact due to Olympic infrastructure).

3. *See generally* Philippe Furrer, *Sustainable Olympic Games: A dream or a reality?*, 7 BOLLETTINO DELLA SOCIETÀ GEOGRAFICA ITALIANA 1, 4 (2002), *available at* [http://www.omerio.unito.it/web/Furrer%20\(eng.\).pdf](http://www.omerio.unito.it/web/Furrer%20(eng.).pdf) (describing large impact hosting has on host city); *see also* INT’L. OLYMPIC COMM., FACTSHEET THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT 1 (Jan. 2014), *available at* http://www.olympic.org/Documents/Reference_documents_Factsheets/Environment_and_sustainable_development.pdf (discussing necessary preparations for Olympic host cities).

4. *See* Daileida, *supra* note 1 (discussing Sochi Olympics’ detrimental environmental impact).

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of human dignity.”⁵ Although the environment is not explicitly mentioned in this tenet, all of the aforementioned objectives are contingent upon the stability of the environment.⁶

While the Games serve primarily as a platform for the world’s greatest athletes and their respective sporting events, this mammoth event simultaneously acts as a public stage for growth and development in the environmental, political, and social arenas.⁷ Undeniably, “sports serve as a terrific vehicle to develop environmental consciousness and to combat social exclusion.”⁸ The ever-evolving nature of the Games has brought environmental awareness to an event that would otherwise be rather limited in focus.⁹ With the environment serving as one of the three Olympic canons alongside sport and culture, cities bidding to host the Games must now devise complex proposals for environmental protection during the events along with plans for future sustainability.¹⁰ Nevertheless, with a history of destruction surrounding the efforts expended to host the Games, determining what constitutes a “Green Olympics” and how a host city can achieve such a goal remains to be seen.¹¹

This Comment will explore the environmental impact of the Games on host nations, particularly in light of recent developments that took place in preparation for the 2014 Winter Olympics in Sochi, Russia.¹² Part II will examine Agenda 21 and the Olympic Charter (Charter) as well as the International Olympic Committee’s (IOC) asserted commitment to both the environment and the

5. INT’L OLYMPIC COMM., SUSTAINABILITY THROUGH SPORT 1, 14 (2012), *available at* http://www.olympic.org/Documents/Commissions_PDFfiles/SportAndEnvironment/Sustainability_Through_Sport.pdf (summarizing goals stated in original Olympic Charter of 1894).

6. *See id.* (discussing various aspects of Olympic goals’ dependence on environmental stability).

7. *See* Stefanie Beyer, *The Green Olympic Movement: Beijing 2008*, 5 CHINESE J. OF INT’L L. 423, 424 (May 19, 2006), *available at* <http://chinesejl.oxfordjournals.org/content/5/2/423.full.pdf?sid=3b5d3eb4-9aa9-4164-a9c1-3163f0240ad5> (detailing various ways Olympic Games bring attention to environmental issues and encourage positive change).

8. *Id.* at 425 (discussing overall impact of athletics on direction of environmental change).

9. *See id.* at 424 (highlighting shift in focus from solely athletics to environmental sustainability).

10. For a discussion of the Olympic Charter and history of the Games, see *infra* notes 17-51 and accompanying text.

11. For a discussion of the sustainability focus through the host city selection process, see *infra* notes 29-39 and accompanying text. *See* Beyer, *supra* note 7, at 428-33 (highlighting host cities’ challenges in promoting sustainability).

12. For a discussion of the most recent Olympic Games in Sochi, Russia, see *infra* notes 142-69 and accompanying text.

concept of sustainable development.¹³ Part III will look to past Games, specifically the 2002 Salt Lake City Games and the 2008 Beijing Games, to explore the preparations made, as well as the impact the Games had, on the environments of the respective host nations.¹⁴ Part IV will highlight the environmental impact of the 2014 Winter Olympics on Sochi, Russia.¹⁵ Lastly, Part V will evaluate host nations' shortcomings regarding compliance with the Charter, while focusing specifically on how to better address environmental concerns more adequately in future Games.¹⁶

II. A GREENER GAMES: THE OLYMPIC MOVEMENT'S COMMITMENT TO THE ENVIRONMENT

Recognizing the importance of introducing environmental and sustainability issues into the global political realm, world leaders came together at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil, to adopt Agenda 21.¹⁷ UNCED's Agenda 21 sought to:

Encourage[] national and local political bodies, non-governmental organisations [sic] (NGOs) and citizen groups to recognise [sic] that environmental and development concerns are inextricably linked, and that a global partnership for sustainable development would lead to "improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future."¹⁸

The United Nations defines "sustainable development" as "development that is balanced between people's economic and social needs

13. For a discussion of the history of the Olympics and elements of the Olympic Charter, see *infra* notes 17-51 and accompanying text.

14. For a discussion of the environmental impact hosting the Games had on Salt Lake City, Utah and Beijing, China, see *infra* notes 52-141 and accompanying text.

15. For a discussion of the most recent Winter Olympics in Sochi, Russia, see *infra* notes 142-69 and accompanying text.

16. For a discussion of ways to minimize negative environmental impact on host cities in the future, see *infra* notes 170-83 and accompanying text.

17. See INT'L. OLYMPIC COMM, AGENDA 21: SPORT FOR SUSTAINABLE DEVELOPMENT 3, 19-20, http://www.olympic.org/Documents/Reports/EN/en_report_300.pdf (last visited Oct. 20, 2014) (discussing history and purpose of United Nations' Conference on Environment and Development).

18. SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 9 (discussing purpose of Agenda 21).

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and the ability of the earth's resources and ecosystems to meet present and future needs."¹⁹

Embracing Agenda 21's ethos for a sustainable future, the IOC recognized the environment as a third pillar of Olympism in 1994, together with sport and culture.²⁰ Indeed, the Charter identifies that one of the IOC's primary roles is "to encourage and support a responsible concern for environmental issues, to promote sustainable development in sport[,] and to require that the Olympic Games are held accordingly."²¹ The Olympic Movement²² also went so far as to adopt its own Agenda 21, recognizing the significance of "lay[ing] down a clear pathway for sustainable development throughout the sporting world."²³ The Olympic Movement's Agenda 21 emphasizes that all athletes participating in the Games require a flourishing environment to both prepare and perform their best.²⁴ As such, Agenda 21 hones in on factors such as green space and facilities, adequate food and nutrition, and basic air and water quality.²⁵ To help meet these objectives, the IOC created the Sport and Environment Commission (Commission) in 1995, tasked with advising the IOC on methods to facilitate the union between the Games and sustainability.²⁶ The Commission views the Games as the ideal platform for raising public awareness on issues of safer, more effective environmental practices.²⁷ In addition to the educa-

19. See Furrer, *supra* note 3, at 2 (describing meaning of "sustainable development").

20. See SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 9 (describing IOC's view and support of Agenda 21).

21. INT'L OLYMPIC COMM., OLYMPIC CHARTER 3, 17 (Sept. 9, 2013), *available at* http://www.olympic.org/Documents/olympic_charter_en.pdf (defining mission and role of IOC).

22. See *id.* at 15 (explaining "Olympic Movement"). The Olympic Movement is comprised of athletes and organizations that agree to comply with the Olympic Charter, and its main goal is to educate the youth through sports practiced in accordance with the tenets of Olympism. *Id.* The Olympic Movement's three primary member organizations are the IOC, the International Sports Federations, and the National Olympic Committees. See *id.*

23. SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 9 (discussing progress of sustainability agendas in Olympic Movement).

24. See *id.* at 22 (highlighting Olympic Movement's policies on sport and environment).

25. See *id.* (listing various environmental factors affecting athletes' performance).

26. See FACTSHEET, *supra* note 3, at 1 (discussing history and development of Sport and Environment Commission).

27. See *Sport and Environment Commission: Composition*, OLYMPIC.ORG, <http://www.olympic.org/sport-environment-commission?tab=games> (last visited Mar. 5, 2014) (detailing two phases for host city selection). Formed by the IOC, the Sport and Environment Commission is made up of members of the IOC along with representatives from the International Sports Federations (IFs), National Olympic

tional component, the Commission also encourages action, especially in the realm of “technology and product development in a city, country and beyond, through the educational value of good example.”²⁸

The Games’ host city selection process consists of two separate phases: the applicant cities phase, and the candidate cities phase.²⁹ In the applicant phase, all interested cities must complete a detailed questionnaire, which notably contains an “environmental conditions and impact” section, thereby illustrating the IOC’s strong concerns regarding the Games’ potential impact on prospective cities’ environments.³⁰ In this section of the questionnaire, applicant cities must detail their current environmental conditions, the likely impact the Games would have on the environment, information about any ongoing environmental projects, and the results of any studies that have been conducted regarding potential venues and their environmental impact on the region.³¹ Upon receiving the completed questionnaires, the IOC Candidature Acceptance Working Group compiles a report of the responses for the IOC Executive Board, which then selects the cities that will move on to the candidate cities phase.³²

In the candidate cities phase, each selected city must submit a “Candidature File” to the IOC, which details the city’s “master plan” for organizing and hosting the Games.³³ The IOC treats any information the candidate cities provide in their files as an embodiment of their commitment to the Games, and the IOC expects the selected city to honor that commitment if chosen as a host.³⁴ As such, the Commission holds that, “[t]he Candidature File is a central element in the development of a ‘Green Games,’ as all commitments regarding actions, programmes [sic] and policies are binding, and should all be carried out and implemented by the Organising [sic]

Committees (NOCs), Organizing Committees for the Olympics (OCOGs), the Paralympic movement, individual experts and athletes. *Id.*

28. *Sport and Environment Commission: Composition*, *supra* note 27 (listing examples of potential sustainable environmental legacies).

29. *See id.* (describing host city selection process).

30. *Id.* (detailing phase one of host city selection process).

31. *See id.* (describing required assessment for phase one of host city selection process).

32. *See id.* (explaining Executive Board’s tasks in host city selection process).

33. *See Part II: Candidature File*, OLYMPIC.ORG, http://www.olympic.org/Documents/Reports/EN/en_report_524.pdf (last visited Oct. 20, 2014) (describing requirements for Candidature File submission).

34. *See id.* (noting ethical commitment host city makes to honor promises made in Candidature File if chosen to host Games).

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Committee.”³⁵ In its Candidature File, each city must complete a survey containing approximately two hundred questions on eighteen different topics; examples of such topics include legal aspects, venue, medical and health services, security, transport, and environmental protection.³⁶

For the environmental protection section, candidate cities must provide the IOC with extensive details regarding the topography of the city, any protected or vulnerable regions, possible natural hazards, and information describing the city’s natural resource management system.³⁷ Further, the IOC requests that each candidate city develop a comprehensive plan for addressing issues such as solid waste management, sewage treatment, transportation, the minimization of air pollution, and energy conservation.³⁸ Candidate cities are also required to perform environmental impact assessments for all possible venues in addition to providing potential remedial measures to lessen any negative environmental consequences of the Games.³⁹

These assessments are only one small component of a larger report known as the Olympic Games Global Impact (OGGI) study.⁴⁰ In 2003, IOC President Jacques Rogge founded the Olympic Games Study Commission, which oversees the OGGI study.⁴¹ The OGGI study evaluates the total impact the Games will have on a host city, beginning when the National Olympic Committee first announces a city’s candidacy, two years before the location is chosen, and ending two years after the Games’ conclusion.⁴² The OGGI study, therefore, spans eleven years and is split into four different reports, providing the IOC with economic, social, and environmental indicators of the Games’ impact.⁴³ Examples of such indicators range from venue construction to water quality and

35. *Sport and Environment Commission: Composition* *supra* note 27 (discussing central importance of Candidature File).

36. *See Part II, supra* note 33 (discussing particulars of Candidature File, specifically survey requirement).

37. *See id.* (describing environmental features of Candidature File).

38. *See id.* (noting environmental queries included in Candidature File).

39. *See id.* (explaining requirements of environmental impact assessment).

40. *See id.* (describing features of Candidature File).

41. *See* INT’L. OLYMPIC COMM., 2012 CANDIDATURE PROCEDURE AND QUESTIONNAIRE 11(2012), *available at* http://www.olympic.org/Documents/Reports/EN/en_report_810.pdf (providing background of Olympic Games Study Commission).

42. *See* OLYMPIC MOVEMENT, OLYMPIC REVIEW 1, 1-2(June 2006), *available at* http://www.olympic.org/Documents/Reports/EN/en_report_1077.pdf (explaining how every Olympic Games Organizing Committee has OGGI studies).

43. *See id.* (explaining various features of OGGI study).

crime rates.⁴⁴ Lastly, the candidate city must “guarantee” to relevant authorities that all work to be completed in preparation for the Games will comply with local and national laws as well as international agreements concerning the environment.⁴⁵

The candidate city chosen to host the Games must work with the Organizing Committee to bring the commitments made in its Candidature File to fruition.⁴⁶ Throughout the planning process and into the development stages, the IOC and Organizing Committee continuously “monitor progress and implementation of the proposed environmental and sustainability actions and policies to ensure maximum fulfillment of commitments and maximum use of the opportunity to improve environmental conditions and practices.”⁴⁷ Moreover, the IOC provides an environmental advisor to the host city to assist in preparation for the Games.⁴⁸ Interestingly, regardless of whether a city’s bid is successful, the rigorous selection process encourages positive change in the environmental realm.⁴⁹ For example, a candidate city’s bid may propose and entail the modernization or complete rebuilding of a particularly dilapidated area of a city to construct a venue for the Games, all of which may be accomplished even if the city is not selected.⁵⁰ Ultimately, the bidding process is competitive and requires interested cities to jump through a number of hoops to receive the honor of hosting such a spectacular mega-event.⁵¹

44. *See id.* (noting measurement tools available for studying impact of Games).

45. *See id.* (noting final step candidate must take). The term “guarantee” is placed in quotes because even though the IOC requires bidding host cities to promise to abide by the Olympic Charter, the IOC’s authority to actually enforce such promises is limited. *See Part II, supra* note 33.

46. *See Sport and Environment Commission: Composition, supra* note 27 (describing how planning changes once host city is selected).

47. *Id.* (explaining IOC’s monitoring of commitments). Vancouver’s Organizing Committee was the first to actually create a specialized sustainability committee, setting six goals during the 2010 Games: 1) accountability; 2) environmental stewardship and impact reduction; 3) social inclusion and responsibility; 4) aboriginal participation and collaboration; 5) economic benefits; and 6) sport for sustainable living. *Id.* For additional information on Vancouver and its approach to sustainability, see SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 27.

48. *See FACTSHEET, supra* note 3, at 3 (noting assistance provided by environmental manager).

49. *See Sport and Environment Commission: Composition, supra* note 27 (describing how competing, even in the IOC Candidature phase, improves cities’ environments).

50. *See id.* (noting various stages of bidding procedure in IOC Candidature Phase).

51. *See id.* (describing IOC Candidature process).

III. LEARNING FROM EXPERIENCE THROUGH CASE STUDIES

A. Salt Lake City, Utah 2002

Salt Lake City was the first city to host the Games after “environment” joined “sport” and “culture” as an Olympic pillar.⁵² In preparation for the Winter Olympics in 2002, Salt Lake City’s Olympic Committee (SLOC) worked closely with its Environmental Advisory Committee (EAC) to ensure its Games met all twelve of the environmental goals from its Candidature File.⁵³

The first goal concerned SLOC’s commitment to establishing a strong environmental program underlying all operations involved in preparation for the Games.⁵⁴ Specifically, the Environmental Policy “applied to all SLOC employees; all SLOC-related venues, functions and operations; contractors; and suppliers of goods and services.”⁵⁵ Under the Environmental Policy, SLOC created educational programs to increase awareness of environmental safeguards, and all employees were required to attend training sessions to ensure they acted graciously toward the environment.⁵⁶ In 2011, one year prior to the start of the Games, SLOC arranged for an environmental compliance manager to ensure that all venue preparations complied with the environmental goals set forth under the original Candidature File and Salt Lake City’s Environmental Policy.⁵⁷

The second goal, Environmental Design and Construction, focused on SLOC’s dedication to designing and constructing facilities to minimize the potential negative environmental impact of the Games.⁵⁸ In the design and planning phase, SLOC collaborated with governmental agencies, private developers, and conservation groups to select venue locations that would be the least destructive

52. See SALT LAKE ORG. COMM., ENVIRONMENTAL PERFORMANCE REVIEW 2 (Jan., 2002), available at http://www.deq.utah.gov/Admin/DocLibrary/docs/2011/SLOC_EnvironPerformReview_Final.pdf (introducing background information for 2002 Salt Lake City Games).

53. See *id.* at 4 (summarizing Salt Lake City’s Game’s twelve point environmental platform). The twelve point environmental platform included: “management, environmental design and construction, temporary facilities, energy and water conservation, materials management, official suppliers, contractors, and sponsors, cultural events and ceremonies, sports and sports organizations, environmental education, transportation, lodging and food services, and environmental monitoring.” *Id.*

54. See *id.* at 5 (highlighting SLOC’s excellent environmental standards).

55. *Id.* (describing SLOC’s environmental policy).

56. *Id.* (providing SLOC’s specific Game’s commitments).

57. See ENVIRONMENTAL PERFORMANCE REVIEW, *supra* note 52, at 6 (providing thorough description of why environmental compliance manager was hired).

58. See *id.* (detailing SLOC’s environmental design and construction).

to neighboring environments.⁵⁹ Once areas were selected, SLOC took steps to ensure that the newly constructed venues were environmentally friendly.⁶⁰ For instance, all venues were built or redesigned to guarantee their long-term use, thereby “serv[ing] the needs of the Winter Games while ensuring that the area’s environment and economy [would] be sustainable for the long term, well beyond the 2002 Olympic Winter Games.”⁶¹ For example, in constructing the Olympic Village, SLOC placed the environment at the forefront of all construction decisions.⁶² SLOC achieved this goal by building venues in locations exposed to optimal sunlight, devising efficient drainage systems to handle runoff, and preserving existing vegetation while incorporating additional flora into the surrounding sites.⁶³ SLOC also achieved its goal of sustainability both during and after the Games by permitting the University of Utah to convert the Olympic Village housing into student housing after the Games concluded.⁶⁴

Additionally, the Utah Olympic Oval, one of three venues built in preparation for the Games, was designed to only use one-third the steel as would otherwise be required for a building its size.⁶⁵ As a result, it was awarded a Leadership in Energy and Environmental Design System (LEED) rating, which was a first for an Olympic venue.⁶⁶ Today, the Olympic Oval is used as a speed skating practice facility.⁶⁷ Further, SLOC minimized the acreage required (and thus environment disturbed) for Soldier Hollow Ski Facility, the site of the Men’s and Women’s Cross-Country, Biathlon and the Nordic Combined Events, by building the course in a loop and crossover

59. *See id.* (noting collaborative efforts made to ensure environmental sustainability in planning phase).

60. *See id.* (explaining SLOC’s dedication to new facilities minimizing environmental impacts). Out of the fifteen Olympic venues in Salt Lake City, only three were built specifically for the Games; however, many changes were made to the existing venues to ensure that they were energy-efficient and eco-friendly. *See id.*

61. *Id.* at 6 (discussing venue’s promotion of sustainable environmental and economic efforts).

62. *See ENVIRONMENTAL PERFORMANCE REVIEW, supra* note 52, at 8 (describing steps SLOC took to ensure environment was placed at forefront of venue construction).

63. *See id.* (detailing various environmental efforts).

64. *See id.* (noting long-term use of Olympic venue).

65. *See id.* at 6 (explaining environmental design considerations).

66. *See id.* (detailing various environmental planning considerations).

67. *See ENVIRONMENTAL PERFORMANCE REVIEW, supra* note 52, at 7 (identifying after-use of Olympic venues).

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fashion.⁶⁸ Since the close of the Games, the public has used the facility for cross-country competitions and training.⁶⁹ Lastly, SLOC constructed Utah Olympic Park to “follow the contours of the land to the maximum extent possible,” thereby reducing the amount of potential destruction to the surrounding habitat.⁷⁰ Since the Games, Utah Olympic Park has been used as a training facility and competition arena for bobsleigh, luge, and ski jumping.⁷¹

Alongside waste management, energy and water conservation were also at the forefront of SLOC’s environmental goals for the 2002 Olympic Games.⁷² Specifically, all new Olympic facilities were built with energy efficiency in mind.⁷³ For example, SLOC installed a retractable shading system on the Utah Olympic Park’s track to shade the ice from the sun and keep out snow.⁷⁴ Additionally, all energy derived from the curling hall’s air conditioning unit was converted to provide heat for both bathrooms and showers at the venue using ammonia, which is innocuous to the ozone layer.⁷⁵ Next, SLOC achieved its water conservation goal by creating a retention basin under the ski jumps at the Utah Olympic Park, which captured runoff and reused it to irrigate the surrounding vegetation.⁷⁶ Ultimately, although it initially accepted a “zero waste” policy,⁷⁷ SLOC settled for an eighty-five percent minimum of waste to be recycled, with the rest being composted.⁷⁸

In addition to ensuring that the Olympic infrastructure was environmentally sound, SLOC addressed the newly acquired third pil-

68. See *id.* at 6-7 (describing environmental design and construction techniques for minimizing required acreage).

69. See *id.* at 7 (highlighting facility’s long term use after Olympic Games).

70. *Id.* (displaying how construction design reduced destruction of habitat).

71. See *id.* at 7 (describing continued use of Utah Olympic Park post-Olympics).

72. See ENVIRONMENTAL PERFORMANCE REVIEW, *supra* note 52, at 9-11 (detailing SLOC’s environmental goals for 2002 Olympic Games).

73. See *id.* at 9 (highlighting SLOC’s energy and water conservation goals).

74. See *id.* (describing various efforts to conserve energy resources).

75. See SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 17 (providing timeline of sustainable development for Olympic Games).

76. See ENVIRONMENTAL PERFORMANCE REVIEW, *supra* note 52, at 10 (describing various efforts to conserve water resources).

77. See Ian Williams & Tony Curran, *Aiming for Zero Waste*, WASTE MGMT. WORLD, <http://www.waste-management-world.com/articles/print/volume-11/issue-4/Features/aiming-for-zero-waste.html> (last visited Mar. 8, 2014) (detailing “zero waste” policy). A “zero waste” policy “aims to eliminate rather than ‘manage’ waste.” *Id.* In addition to “encouraging waste diversion from landfill and incineration, it is a guiding design philosophy for eliminating waste at source and at all points down the supply chain.” *Id.*

78. See ENVIRONMENTAL PERFORMANCE REVIEW, *supra* note 52, at 10 (detailing SLOC’s waste management plan).

lar of “environment” through cultural events and educational programs designed to increase awareness.⁷⁹ For example, SLOC initiated the program, “Plant it Green: The Global Trees Race,” which planted 100,000 trees in Utah and over two million trees across the globe.⁸⁰ In doing so, SLOC aimed to “provide significant benefits not only in terms of air and water quality and soil and watershed protection, but also by contribut[e] to a positive mindset among the public through beautification of local landscapes, thus encouraging improved protection and enhancement of natural resources long after the Games are concluded.”⁸¹

Despite the efforts made by SLOC to ensure that the Salt Lake City Games were the “greenest” games to date, there were still a multitude of issues that arose before the torch was lit and the Games commenced.⁸² In spite of the energy-efficient construction projects, the areas selected for some of the events proved problematic.⁸³ For example, in order to provide an adequate venue for the Men’s and Women’s Alpine Skiing events, SLOC had to use previously undeveloped and protected lands.⁸⁴ To make this possible, the government “traded” over 1,300 adjacent acres of previously designated National Forest land to the private Snowbasin Resort, which was to serve as a main venue site.⁸⁵ In return, the government received various plots of land in other parts of Utah.⁸⁶

While the government technically gained more than ten thousand additional acres through this deal, conservation groups argued that these acres were far less ecologically valuable.⁸⁷ Furthermore, opponents of the “trade” questioned the legality of the transaction.⁸⁸ Congress passed the Snowbasin Land Exchange

79. *See id.* at 11 (describing SLOC’s environmental programs).

80. *See* SUSTAINABILITY THROUGH SPORT, *supra* note 5, at 17 (describing significance of planting programs during Salt Lake City Games).

81. ENVIRONMENTAL PERFORMANCE REVIEW, *supra* note 52, at 11 (detailing SLOC’s efforts to enhance environment while increasing public awareness).

82. *See* Martin A. Lee, *Greenest Games Ever? Not!*, LOS ANGELES TIMES (Feb. 3, 2002), <http://articles.latimes.com/2002/feb/03/opinion/op-lee> (discussing SLOC’s failed attempts at environmental sustainability).

83. *See* Cat Lazaroff, *Winter Olympics Not a Green Triumph*, ENV’T NEWS SERV. (Feb. 11, 2002), <http://www.ens-newswire.com/ens/feb2002/2002-02-11-06.html> (documenting environmental damage resulting from preparation of Games).

84. *See id.* (noting negative environmental impact of Salt Lake City Games).

85. *See id.* (describing ethically questionable dealings between government and SLOC in preparing for Salt Lake City Games).

86. *See id.* (explaining unconventional agreements made between government and SLOC in preparing for Salt Lake City Games).

87. *See id.* (noting destructive nature of construction process).

88. *See* Lazaroff, *supra* note 83 (highlighting conservation group’s argument that exchange “overrode federal environmental laws”).

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Act in 1996 with the sole purpose of obtaining these lands.⁸⁹ Further, Congress temporarily suspended the Endangered Species Act, which had historically protected these lands from development, to allow the trade to take place.⁹⁰ In doing so, Congress exempted a decision that would have normally been subjected to public review.⁹¹ Conservationists posit that these decisions were made without regard for the potential effect on the previously untouched mountain and forest ecosystems.⁹² The end result: 1,377 acres of untouched mountains, forests, meadows, and wetlands were transformed into Olympic venues replete with hotels, restaurants, stadiums, and other facilities aimed to serve the masses.⁹³

Additionally, numerous transportation issues arose in preparing for the Games.⁹⁴ When bidding to host the Games, Salt Lake officials pledged that public transportation would be available for all spectators and athletes; however, this was not the case.⁹⁵ SLOC claimed that the seventeen million dollar price tag required for providing one thousand rental buses over the seventeen days of the Games was too much of a financial burden.⁹⁶ Instead, SLOC spent a whopping thirty-five million dollars building parking lots and enlarging already existing lots to accommodate the increase in private transportation.⁹⁷ Moreover, SLOC borrowed four thousand “gas-guzzling SUVs, which are exempt from U.S. clean air standards” to transport athletes and spectators to and from venues.⁹⁸ As such, exhaust from the plethora of private vehicles added to the already existing “sickly, yellow haze during winter temperature inversions in Salt Lake,” undoubtedly affecting the city’s overall air quality.⁹⁹

As an additional testament to SLOC’s environmental shortcomings, it refused the United States Department of Energy’s offer to utilize millions of dollars worth of solar panels during the

89. *See id.* (noting legislation permitted deal to go forward with government).

90. *See id.* (detailing how SLOC was able to work around Endangered Species Act).

91. *See id.* (explaining how Congress disregarded traditional procedures).

92. *See id.* (describing negative environmental impact as feared by conservationists).

93. *See Lee, supra* note 82 (noting consequences of “trade”).

94. *See id.* (detailing transportation issues that arose).

95. *See Lazaroff, supra* note 83 (highlighting economic reasons cited by SLOC for failing to provide public transportation).

96. *See id.* (explaining shortcomings of transportation planning).

97. *See Lee, supra* note 82 (describing amount of money spent in private transportation).

98. *See id.* (describing how private transportation was used to transport those who attended).

99. *Id.* (explaining effect of extra exhaust on air quality).

Games.¹⁰⁰ Instead, SLOC approved of an Olympic Rings display that used a total of fifty thousand kilowatt hours of electricity — an outrageous amount of energy when compared to other, more efficient options that could have been chosen.¹⁰¹

In monetary terms, SLOC spent an astonishing two billion dollars in preparation for the 2002 Games.¹⁰² Six million dollars were originally allotted to addressing environmental issues; however, in February 1999, SLOC reduced the amount to one and a half million dollars, just one-tenth of one percent of the total Olympic cost.¹⁰³ In explaining this reduction, SLOC remarked that “[w]hen budgets are being tightened, environmental programs will appear as luxuries rather than as integral components of a successful event.”¹⁰⁴

B. Beijing, China 2008

When the capital city of China was selected to host the 2008 Games, the IOC remarked, “Beijing currently faces a number of environmental pressures and issues, particularly air pollution. However, it has an ambitious set of plans designed, which are comprehensive enough to greatly improve Beijing’s overall environmental condition.”¹⁰⁵

Recognizing that the key to securing the Games was to “draw its attention to the emerging new pillar of the Olympic movement — the environment,” Beijing compiled an Olympic Action Plan (Plan) that included a detailed environmental proposal relevant to all aspects of the Games.¹⁰⁶ The Plan focused primarily on pollution, transportation, facilities’ construction, and waste management.¹⁰⁷

100. See Lazaroff, *supra* note 83 (describing environmental shortcomings in 2002 Games).

101. See *id.* (providing example of use of nonrenewable sources).

102. See Lee, *supra* note 82 (describing amount of money spent in preparation for Games).

103. See *id.* (explaining shrinking of environmental budget and its proportion to total spending).

104. Lazaroff, *supra* note 83 (quoting SLOC as to priority allocation of budget).

105. See UNITED NATIONS ENVTL. PROGRAMME, INDEPENDENT ENVIRONMENTAL ASSESSMENT: BEIJING 2008 OLYMPIC GAMES 13 (Feb. 2009), available at http://www.unep.org/pdf/BEIJING_REPORT_COMPLETE.pdf (acknowledging Beijing’s environmental issues before 2008 Games).

106. Beyer, *supra* note 7, at 423-24 (describing plan created to address environmental concerns).

107. See *id.* (describing elements of plan).

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Beijing's Organizing Committee for the Olympic Games (BOCOG), alongside the Beijing Municipal Government, introduced three concepts, or mantras, it hoped would encompass the 2008 Games: the Green Olympics, the High-Tech Olympics, and the People's Olympics.¹⁰⁸ To achieve a "Green" Olympics, BOCOG set forth five target areas for improvement in the city: air quality, water environment, solid waste management, ecological protection, and prevention and control of transportation pollution.¹⁰⁹ Interestingly, the "Green" Olympics model was represented in advertisements by five mascots, four of which were animals thought to symbolize the natural elements.¹¹⁰ A flying fish called the "Beibei" stood for clear water, an antelope called the "Yingying" represented Beijing's commitment to "grass-covered ground," a panda called the "Jingjing" stood for environmental protection and "green hills," and a flying swallow called "Nini" represented "blue skies."¹¹¹ As one of the world's most polluted cities, Beijing's Plan centered on addressing the poor air quality and persistent water shortages that plagued the city.¹¹²

To combat the excessive air pollution in Beijing, the Beijing Municipal Government focused on four major contributing factors: soot pollution, automobile emissions, industrial pollution, and dust pollution.¹¹³ First, BOCOG addressed the particulate pollution caused by widespread coal production by transitioning coal-fired boilers to natural gas as well as coal heating to electrical heating.¹¹⁴ Second, to combat automobile pollution, Beijing enacted new standards and guidelines for vehicle emissions, required that vehicles be inspected and tested for compliance with said standards, and improved public transportation options.¹¹⁵ Third, the Beijing Mu-

108. See Deborah Seligsohn, *Was It "The Green Olympics?"*, WORLD RES. INST. (Aug. 23, 2008), <http://www.wri.org/blog/2008/08/was-it-green-olympics> (addressing whether BOCOG met its lofty goals for Games); see also INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 16 (proposing three goals for 2008 Olympics).

109. See INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 14-17 (setting forth target areas of improvement).

110. See *id.* at 16 (describing designated mascots for Beijing Games). The fifth mascot, Huanhuan, represented the Olympic Torch. *Id.*

111. See *id.* (summarizing mascots for Games).

112. See Beyer, *supra* note 7, at 423 (describing purpose of Beijing Plan).

113. See INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 27-30 (describing major contributions to addressing pollution).

114. See *id.* at 27 (illustrating changes made in energy production to limit particulate pollution).

115. See *id.* at 28 (addressing efforts made to limit automobile pollution). For more information about Beijing's efforts to limit vehicle emissions, see *infra* notes 118-24 and accompanying text.

nicipal Government addressed industrial pollution by having many of the city's most highly polluting factories either relocate or utilize more efficient and environmentally friendly air processing technology.¹¹⁶ Finally, the city reduced dust pollution from construction sites by taking precautions prior to burning waste, promoting road sweeping and other upkeep efforts, and training builders to manage their sites more cautiously.¹¹⁷

In the years leading up to the 2008 Summer Games, BOCOG also focused on environmental improvement through clean transportation.¹¹⁸ BOCOG created exceptionally strict emission guidelines for all new vehicles, introducing a Fourth Phase Emission Gasoline Standard that was equivalent to Euro IV in 2008.¹¹⁹ Further, already existing vehicles were subjected to enhanced inspection and maintenance guidelines, and a large effort was made to improve fuel quality by reducing sulfur levels.¹²⁰ Additionally, half of all privately owned automobiles were prohibited from entering Beijing on specific days pursuant to an odd and even number license plate program.¹²¹ BOCOG also expedited the creation of additional public transportation options.¹²² The city constructed new subway lines and placed enormous buses that were capable of carrying up to 180 passengers along the main roads.¹²³ As an incentive to utilize public transportation during the Games, all Olympic ticket holders enjoyed free access to the metro and buses.¹²⁴

Beijing's water quality was also among BOCOG's main concerns.¹²⁵ From 2001 to 2007, Beijing developed five new sewage treatment plants, thereby exceeding the Olympic Bid commitment of treating nearly ninety percent of the sewage produced.¹²⁶ En-

116. See INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 28 (noting changes made to lessen industrial pollution).

117. See *id.* (describing measures to reduce dust pollution).

118. See *id.* at 40 (outlining Beijing's goals for curbing motor vehicle emissions).

119. See *id.* (noting emissions standards implemented by Beijing).

120. See *id.* (detailing improvements made to fuel quality).

121. See INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 29 (describing license plate program).

122. See *id.* at 43-44 (illustrating public transportation measures during Games).

123. See *id.* (noting BOCOG's efforts to control air pollution via environmentally friendly transportation measures).

124. See *id.* at 44 (noting that Olympic ticket holders received free public transportation).

125. See *id.* at 72 (explaining BOCOG's water treatment efforts).

126. See INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 75 (identifying sewage treatment plants constructed in preparation for 2008 Games).

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hancing the water recycling system was also a major priority prior to the Beijing Games.¹²⁷ To keep up with water demands, the city encouraged both industries and households to not only recycle and implement more efficient practices but also to reduce their overall water consumption.¹²⁸ Lastly, BOCOG installed water-saving features in all Olympic venues such as no-flush toilets and the collection and subsequent use of rainwater for irrigation of the grounds.¹²⁹

To provide ecological protection to China's capital city before the 2008 Games, BOCOG concentrated on three main initiatives: urban greening and beautification, afforestation, and wildlife protection.¹³⁰ Regarding urban greening and beautification, BOCOG constructed more than four hundred new hectares of greening area within the city and refurbished close to an additional four hundred pre-existing hectares.¹³¹ BOCOG also planted thirty million trees and rose bushes within the city to support its afforestation initiative.¹³² Finally, regarding wildlife protection, the city established twelve nature reserves in an effort to protect its plants and animals.¹³³

After BOCOG instituted the aforementioned protocols for the 2008 Games, scientists immediately observed a dramatic decrease in air pollution levels.¹³⁴ Indeed, the transformation was so significant that scientists documented a linkage between air pollution levels and heart health that coincided with the implementation of the environmental protocols.¹³⁵ In a study conducted at the Keck School of Medicine of the University of Southern California, environmental researchers examined the heart rates, blood pressures, and biological markers for inflammation and blood clotting of 125 male

127. *See id.* at 76 (describing water recycling measures).

128. *See id.* (noting Beijing's water-related environmental efforts).

129. *See id.* (explaining city's water efforts).

130. *See id.* at 60 (explaining BOCOG's environmental protection efforts).

131. *See* INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 60 (noting BOCOG's greening measures). Four hundred hectares is equivalent to approximately 988 acres of land. *See* METRIC CONVERSIONS, <http://www.metric-conversions.org/area/hectares-to-acres.htm> (last visited Oct. 9, 2014).

132. *See* INDEPENDENT ENVIRONMENTAL ASSESSMENT, *supra* note 105, at 63 (describing Beijing's creation of green spaces).

133. *See id.* at 66 (illustrating BOCOG's wildlife protection efforts).

134. *See* Ryan Jaslow, *Reducing air pollution during 2008 Beijing Olympics boosted residents' heart health, research reveals*, CBS NEWS (May 16, 2012, 10:48 AM), <http://www.cbsnews.com/news/reducing-air-pollution-during-2008-beijing-olympics-boosted-residents-heart-health-research-reveals> (discussing substantial decrease in Beijing air pollution leading up to Games and subsequent health impact).

135. *Id.* (noting evidence gathered from 2008 Beijing Olympics revealed link between heart health and air pollution).

and female non-smoking physicians who worked at a central Beijing hospital.¹³⁶ During the time period leading up to and during the Olympics and Paralympics, the researchers noted substantial reductions in the levels of biomarkers indicative of blood clotting as well as other measures of cardiovascular physiology in these healthy adults.¹³⁷ As soon as the Olympics ended, however, and the need to control pollution levels diminished, the researchers observed a significant increase in blood pressure levels and other measures correlated with heart attack or stroke.¹³⁸ Sadly, “The political will to push cars off the roads, relocate polluting factories beyond the city and suspend industrial production in nearby provinces went away as fast as world sprint champion Usain Bolt left town.”¹³⁹ After the Games, Beijing’s citizens’ cardiovascular systems were again bombarded by smog and the chronic air pollution that afflicted the city well before seventeen billion dollars was spent on preparing for the Games.¹⁴⁰ Despite the positive environmental effects observed during the Games, very little was done following the Closing Ceremony to maintain or continue such efforts.¹⁴¹

IV. THE 2014 SOCHI, RUSSIA OLYMPIC GAMES – THE GOOD, THE BAD, AND THE UGLY

The 2014 Sochi, Russia Games were not only the most expensive Winter Games of all time, but they also appear to have had the largest negative environmental impact on a city hosting the

136. *See id.* (referencing studies conducted by Keck School of Medicine and other studies reported in Archives of Internal Medicine). These factors are said to be indicative of heart disease. *Id.* For a detailed look at the study, see generally David Q. Rich et al., *Association Between Changes in Air Pollution Levels During the Beijing Olympics and Biomarkers of Inflammation and Thrombosis in Healthy Young Adults*, 307 JAMA 2068 (May 16, 2012), available at https://jama.jamanetwork.com/data/. . ./jpc120002_2068_2078.pdf (concluding air pollution levels during Games were associated with changes in biomarkers connected to heart disease).

137. *See* Jaslow, *supra* note 134 (examining study’s findings). Specifically, “Von Willebrand factor” and “soluble CD62P levels” were observed, both of which are associated with blood clotting. *Id.*

138. *Id.* (finding increase in biomarkers and blood pressure after Games concluded).

139. Li Jing, *Pollution-free days of Beijing Olympics now just a happy memory*, SOUTH CHINA MORNING POST (Aug. 10, 2013, 5:34 AM), <http://www.scmp.com/news/china/article/1295644/pollution-free-days-beijing-olympics-now-just-happy-memory> (discussing how quickly Beijing’s air quality returned to pre-Games levels upon conclusion of Games).

140. *See* Jaslow, *supra* note 134 (examining increase in heart disease markers after Games concluded).

141. *See* Jing, *supra* note 139 (noting short-lived environmental improvement from preparation for 2008 Games).

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Games.¹⁴² Sochi's Candidature File contained a multitude of lofty goals for placing the environment on a pedestal.¹⁴³ Indeed, the Candidature File included an overarching pledge to utilize a Sustainability Management System to oversee the construction of all venues and preparations leading up to the Games.¹⁴⁴ Though Sochi met and exceeded air and water quality standards set forth by the World Health Organization (WHO) as well as the Russian Federation, the Candidature File considered additional ways to safeguard and improve upon the air and water quality in the region.¹⁴⁵ Specifically, regarding air quality, the Federal Target Programme for the Development of Sochi (FTP) guaranteed funds for constructing a high-speed electric railroad, limiting freight traffic within the city, controlling the quality of petroleum items sold within the city limits, providing significant incentives for those who chose to operate vehicles powered by alternative energy, expanding and rehabilitating green areas and parks, changing municipal boilers from carbon to gas fuel, and reforesting Sochi National Park.¹⁴⁶ Regarding water quality, Sochi's drinking water met or exceeded the WHO's physical, chemical, and microbial standards; the FTP vowed, however, to dedicate funds to new sewerage systems and the development of safer water supplies.¹⁴⁷

Notably, Sochi's Candidature File also included a pledge to establish a zero waste system, which called for the construction of new facilities for converting waste into energy and building supplies.¹⁴⁸ Sochi's Candidature File also vowed to achieve carbon-neutral sta-

142. See Joshua Yaffa, *The Waste and Corruption of Vladimir Putin's 2014 Winter Olympics*, BLOOMBERGBUSINESSWEEK (Jan. 2, 2014), <http://www.businessweek.com/articles/2014-01-02/the-2014-winter-olympics-in-sochi-cost-51-billion> (analyzing Russia's expenditure of over fifty-one billion dollars on Sochi Games); see also Geert Groot Koerkamp, *Olympic Winter Games have damaging effect on Sochi's environment*, DEUTSCHE WELLE (Feb. 21, 2014), <http://www.dw.de/olympic-winter-games-have-damaging-effect-on-sochis-environment/a-17449525> (discussing environmental impact of Games on Sochi).

143. See, ENV'T AND METEOROLOGY, GATEWAY TO THE FUTURE 65, available at https://web.archive.org/web/20071025092747/http://sochi2014.com/sochidwnld/bid_book/Book%201/Theme%205/Theme%205%20sprds.pdf (pledging environmental sustainability in preparation and hosting of Games).

144. See *id.* at 71 (outlining particulars of Sustainability Management System).

145. See *id.* at 67-70 (comparing Sochi air and water quality to WHO standards).

146. *Id.* at 67 (outlining FTP's progressive initiatives to enhance Sochi's air quality).

147. See *id.* at 69, 71 (detailing physical, chemical, and microbial levels of Sochi water as well as commitment to working closely with government administrations to maintain water quality).

148. See GATEWAY TO THE FUTURE, *supra* note 143, at 75 (outlining means by which SOOC planned to meet its zero waste goal).

tus by “retrofitting existing energy production facilities to operate using renewable fuels, and by offsetting remaining greenhouse gas emissions with emission reduction credits.”¹⁴⁹ Other objectives included reducing the overall power consumption through renewable energy in all Olympic venues, utilizing recycled and environmentally friendly building materials to construct new venues, improving wildlife habitats in Sochi National Park and Biosphere reserve areas, rehabilitating disturbed city areas, and making significant efforts to preserve the natural terrain of the city while constructing new venues.¹⁵⁰

Specifically pertaining to the construction of approximately two hundred new Olympic venues, Sochi’s Olympic Organizing Committee (SOOC) promised to abide by “green” construction standards, which included the installation of LED lighting for the Bolshoy Ice Dome, the Sanki Sliding Center, and the Fisht Olympic Stadium, as well as the use of germicidal paint, air purification and decontamination systems, and solar panels for heating water.¹⁵¹ Interestingly, the World Wide Fund for Nature (WWF) labeled Sochi as “one of the [two hundred] eco-regions of the world whose biodiversity is of global importance.”¹⁵² With this recognition, the Candidature File pointed out that massive construction in the region in preparation for the Games warranted “close cooperation between public and voluntary organisations [sic] both in Russia and abroad” to help preserve such biodiversity.¹⁵³

Sochi, like Salt Lake City and Beijing before it, set forth lofty environmental goals when bidding to host the Games.¹⁵⁴ Dr. Allen Hershkowitz, a senior scientist with the Natural Resources Defense Council, stated, “[n]ormally when you talk about the Olympics there’s a lot of good stuff to say . . . [t]he International Olympic Committee is sensible about climate change and ecologically progressive.”¹⁵⁵ Despite all of the “good stuff” that was promised in

149. *Id.* (adopting policy for all new construction projects related to Games).

150. *Id.* (listing objectives to reach carbon neutral status).

151. *See Olympic Venues, Certified with «Green» Construction Standards*, SKI PARADISE (Feb. 3, 2014, 10:31 PM), <http://nieveyalgomas.blogspot.com/2014/01/sochi-2014s-venues-6-olympic-venues.html> (listing measures taken to abide by green construction standards).

152. *See GATEWAY TO THE FUTURE*, *supra* note 143, at 83 (describing special environmental features of Sochi region).

153. *See id.* (noting necessity of organizational cooperation during construction).

154. For a further discussion of the environmental efforts made by Salt Lake City and Beijing, see *supra* notes 52-141 and accompanying text.

155. *See Ari Phillips, Dirty Games: How Sochi Abandoned Promises, Jailed Activists And Devastated The Environment*, CLIMATEPROGRESS (last updated Feb. 12, 2014,

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Sochi's Candidature File and subsequent planning phase by SOOC, Dr. Hershkowitz noted that "the problem with Sochi is that there's been zero transparency regarding the development process and it's been impossible to monitor the ecological impacts."¹⁵⁶

Vladimir Putin, Russia's President, promised to put the environment first, but his actions spoke much louder than his words.¹⁵⁷ For example, SOOC certainly failed to meet the clean water promises and "zero waste" pledge undertaken in Sochi's bid, evidenced by an Associated Press discovery that "Russia's state-owned rail monopoly [was] dumping tons of construction waste into what authorities call[ed] an illegal landfill, raising concerns of possible contamination in the water that directly supplie[d] Sochi."¹⁵⁸ Rashid Alimov, coordinator of the toxic waste program at Greenpeace Russia, stated that Sochi officials have interpreted "zero waste" to mean simply keeping all waste out of view.¹⁵⁹ Waste was clearly not kept out of view, as locals who were entirely displaced by the Olympic mayhem reported that they saw firsthand illegal dumps packed to the brim with overflowing construction waste, and their homes were "sinking into the earth" as a result of huge construction trucks that damaged their homes' foundations.¹⁶⁰ Despite all of the chaos, state-run TV stations, per President Putin's orders, only focused on the new and improved Olympic venues, high-speed train rails, and luxury malls that had been put into place in preparation for the Games.¹⁶¹ Interestingly, "Sochi residents [were] not only willing to talk to reporters but [would] stop them in the street and invite them over to see 'what the real Sochi looks like.'"¹⁶² De-

4:24 PM), <http://thinkprogress.org/climate/2014/02/12/3264881/sochi-dirty-games/#> (describing Dr. Hershkowitz's sentiments regarding Sochi Games).

156. *See id.* (noting lack of transparency).

157. *See* Peter Finn, *Putin Directs Organizers of 2014 Winter Olympics to Protect Wilderness*, THE WASH. POST (July 3, 2008, 1:26 PM), <http://www.washingtonpost.com/wp-dyn/content/article/2008/07/03/AR2008070301912.html> (describing Russia's approach in bidding to host Games). In a meeting with IOC Chairman Jean-Claude Killy, President Vladimir Putin, then Prime Minister, was quoted as saying, "[i]n setting our priorities and choosing between money and the environment, we're choosing the environment . . . If the balance of nature is upset, this could lead to a situation that would be impossible to restore for any money." *Id.*

158. *See* Nataliya Vasilyeva, *Russia breaks 'Zero Waste' Olympic ledge*, ASSOCIATED PRESS (Oct. 29, 2013, 6:49 PM), <http://bigstory.ap.org/article/russia-breaks-zero-waste-olympic-pledge> (noting dismal environmental conditions).

159. *See id.* (discussing issues that plagued Sochi locals).

160. *See* Nataliya Vassileva, *A crumbling Sochi hides behind Olympic facades*, ASSOCIATED PRESS (Jan. 20, 2014, 3:02 AM), <http://bigstory.ap.org/article/crumbling-sochi-hides-behind-olympic-facades> (describing conditions faced by displaced Sochi locals).

161. *See id.* (noting poor environmental situation).

162. *Id.* (describing residents' discontent with environmental conditions).

spite promises to promote and enhance air quality in its Candidature File, Sochi's Kudepsta district became home to the world's largest thermal power station, armed with twenty gas-piston generators that each release approximately 151 tons of nitrogen oxides into the air each year.¹⁶³ Viktor Pliss, chief specialist of the Sochi Urban Planning Municipal Institute of Genplan, stated that emissions from the power station alone could very well have made the Sochi Olympics "the most polluted in Olympic history."¹⁶⁴

Environmental Watch on North Caucasus (EWNC), a Russian non-profit environmental group, warned the IOC that, "Russia, the Sochi 2014 Organizing Committee, the Russian Olympic Committee and the city of Sochi are not in compliance with binding guarantees stipulated in the Olympic Contract."¹⁶⁵ In fact, EWNC calculated that in February 2013, a year before the Games even took place, "approximately [two-thousand] hectares of Greater Sochi had been radically changed; radical land expropriation, destruction of natural landscapes and appearance of anthropogenic landscapes ha[d] taken place."¹⁶⁶ Additionally, EWNC found that the Mzymta River had become a toxic waste carrier; crushed-stone quarries had been mined in off-limits areas of Sochi National Park, and "[n]ew threats of landslides, erosion, avalanches, and mudslides ha[d] appeared on the slopes of mountain ridge Aibga as a result of continuing deforestation and construction of ski trails, chair lifts and other objects."¹⁶⁷ Despite WWF's labeling of Sochi as one of the most biologically rich and ecologically diverse regions of the world, the EWNC reported that the city witnessed the destruction of various animal and plant species.¹⁶⁸ Further, the EWNC stated, "Legal obligations stipulated in the Bid Book [were] breached" by transporting waste from the designated Olympic area in Sochi to outside landfills.¹⁶⁹

163. See Alexey Malashenko, *Controversy and Concern Over the Sochi Olympics*, CARNEGIE MOSCOW CTR. (Apr. 10, 2013), <http://m.ceip.org/moscow/2013/04/10/controversy-and-concern-over-sochi-olympics/fyyg> (noting air quality issues after Sochi Games).

164. *Id.* (explaining effects of Sochi pollution).

165. *Dark Side of the Sochi Winter Olympics: Environmental Damage*, ENVTL. NEWS SERV. (Feb. 11, 2013, 10:32 PM), <http://ens-newswire.com/2013/02/11/dark-side-of-the-sochi-winter-olympics-environmental-damage/> (noting failed efforts of SOOC to keep environmental promises).

166. *Id.* (describing destructive changes made in preparation for Sochi Games).

167. *Id.* (pointing out environmental destruction from hosting Games).

168. See *id.* (noting consequences of hosting Games to biodiversity).

169. See *id.* (detailing waste issues during Sochi Games).

V. TRAINING FOR A “GREEN” MEDAL

In light of the most recent events in Sochi, as well as in previous Games, it is vital that future host nations’ actions match their seemingly ambitious environmental goals.¹⁷⁰ For example, during the 2002 Winter Games in Salt Lake City, SLOOC had commendable intentions and put forth a positive initial effort in addressing environmental concerns during the preparation stages; however, SLOOC retrospectively noted that environmental programs were luxuries compared to the necessity of functioning facilities.¹⁷¹ Indeed, the future “[s]uccess of Olympics environmental programs will rely on the organizers’ abilities to produce appropriate funding sources at the outset of the Games planning and protect them to the end of the Games.”¹⁷² Accordingly, when host cities allocate funds and set forth plans for impending Games, environmental programs should be equally as valued as sport and culture.¹⁷³

Additionally, if the environment is to be a true priority in future Games, the IOC must thoroughly evaluate the existing infrastructure, or lack thereof, in potential host nations.¹⁷⁴ An underdeveloped city tasked with hosting a mega-event like the Olympics will need to construct a plethora of venues, hotels, sewage facilities, and even entirely new transportation methods to accommodate the influx of people; doing so may place the environment on the backburner.¹⁷⁵ For example, “Russia spent nearly [nine] billion [dollars] on a [thirty-one]-mile rail and road from Sochi to the mountains for the alpine events — more than the total cost of the 2010 Vancouver, 2006 Torino, or 2002 Salt Lake City Games.”¹⁷⁶ Had the IOC considered the desolate condition of Sochi more seriously in terms of the amount of time SOOC would need to devote to preparing for the Games, it may have avoided selecting a city facing “the scramble to construct the necessary infrastructure

170. For a further discussion of host cities’ experiences with the Games, see *supra* notes 52-169 and accompanying text.

171. See Lazaroff, *supra* note 83 (noting importance of appropriating funds to environmental protection).

172. *Id.* (emphasizing need for funds geared to addressing environmental protection).

173. For more information about the Olympic pillars, see *supra* note 20 and accompanying text.

174. See Phillips, *supra* note 155 (describing measures ICO must take when evaluating future cities’ ability to host Games).

175. *Id.* (describing noteworthy changes that must be made when hosting Games).

176. See *id.* (discussing extreme costs in preparing for Sochi Games).

[which] only adds to the temptation to overlook environmental commitments.”¹⁷⁷

Lastly, and perhaps most importantly, the IOC must play a more prominent role in ensuring that host nations not only comply with conditions in the Charter, but also follow through with the environmental programs and considerations listed in bidding nations’ Candidature Files.¹⁷⁸ Despite the media buzz surrounding events leading up to the most recent Sochi Games, “[t]he IOC [was] notably absent from the discussion around Sochi’s environmental degradation or the Games’ impact on nearby towns that ha[d] been cut off by new highways and lack potable water.”¹⁷⁹ One of the most significant issues is the lack of legal authority that the IOC has had over host nations.¹⁸⁰ Indeed, a spokesperson for Olympstroy, the state-owned Olympic construction company that oversaw all of the preparations for Sochi, revealed to reporters that, “[the IOC] has no legal mechanisms to address [environmental] complaints,” and that “law enforcement agencies and federal authorities should deal with [SOOC].”¹⁸¹ Considering this, it is clear that the IOC must take a firmer stance in mandating that host nations’ environmental promises are fulfilled. Ultimately, just as Dr. Hershkowitz expressed, “it’d be nice to learn from each Olympics how to do the next one better. It’s interesting to see how an open society allows for much more environmental progress, frankly, because of the give-and-take between various stakeholders.”¹⁸² Undoubtedly, along with a more open dialogue, “the IOC needs to

177. *Id.* (noting Sochi’s lack of existing infrastructure when chosen to host Games).

178. *See id.* (calling attention to IOC’s shortcomings and recommendations for future Games).

179. Phillips, *supra* note 155 (describing IOC’s absence in regulating environmental situation in Sochi).

180. *See* Richard Galpin, *Russia scientist fears arrest over Olympic warnings*, BBC NEWS (Apr. 16, 2010, 3:59 PM), <http://news.bbc.co.uk/2/hi/europe/8624894.stm> (mentioning lack of IOC’s legal authority).

181. *Id.* (noting lack of IOC authority).

182. Phillips, *supra* note 155 (providing Dr. Hershkowitz’s hopes for future Games).

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reconsider how it ensures sustainability standards are met in the future.”¹⁸³

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183. See *The Not So Sustainable Sochi Winter Olympics*, TIME (Jan. 30, 2014), <http://time.com/2828/sochi-winter-olympics-environmental-damage/> (describing how Sochi Olympics were far from “green”).

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